



THE DISASTER RESEARCH CENTER
THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO 43210

Research Report #14

The 1965 Montreal, Canada Apartment House Explosion:
Some Notes and Comparisons with the Indianapolis,
Indiana Coliseum Explosion

David Adams

Department of Sociology
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OCD REVIEW NOTICE

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On March 1, 1965, an explosion occurred in an apartment house in Ville LaSalle, a suburban municipality of 41,000 people seven miles southwest of Montreal, Canada. The blast and subsequent fire caused extensive property damage, almost completely destroying the 24 apartments located in one of the three-story, U-shaped buildings, damaging the other structures in the project complex, forcing the residents to evacuate, and blowing out windows in the buildings in the surrounding blocks. The blast left a crater some 20 feet deep; the explosion was heard a mile away. Twenty-seven persons were killed; 29 of the 48 injured were hospitalized. Fifteen of those killed were children.

The same day two DRC staff members left for Montreal to make a reconnaissance of organizational responses to this disaster. Although not a community disaster by the Center's criteria, two characteristics of the Montreal explosion suggested possible implications for disaster research: first, since the explosion occurred in Canada, there was the possibility of making a few cross-cultural comparisons with typical responses in the United States; and secondly, because the Montreal disaster was comparable in some respects to the 1963 Coliseum explosion in Indianapolis, limited but more specific analyses of similar organizations under similar conditions were possible.¹

The reconnaissance trip established that an in-depth study was not warranted. However, it was felt that the observations made were worthy of being noted, and this report is the consequence. Agency documents as well as tape recordings and transcripts of interviews with members

of seven public and quasi public groups involved in the disaster -- the LaSalle Police-Fire Department, the General Hospital, the Mayor, and the Montreal Civil Protection, Red Cross, Salvation Army and St. John's Ambulance Service -- have provided the basis for a chronological reconstruction of organizational responses to the Montreal explosion, and a comparative analysis of these responses with those of similar agencies in Indianapolis.

Chronology

The explosion occurred Monday morning, March 1, at approximately 8:15, shortly after the majority of men had left for work and shortly before most of the children had left for school. Thus, the time of the accident accounted for the large number of children directly involved. A radio helicopter broadcasting traffic conditions was nearby and provided an eye-witness account of the explosion. This account was heard by the Coordinator and the Welfare Officer of the Montreal Civil Protection, both of whom were driving to work. They immediately communicated with each other by radio. The Coordinator determined to proceed directly to LaSalle. He arrived at 8:30 a.m., about the same time as members of the LaSalle Police-Fire Department. Initially, that organization had received a report that the explosion had occurred at the Sherwin-Williams Paint Company plant, a half-mile from the housing project, but the police and fire units had proceeded directly to the apartment house after the cars dispatched on the first call discovered the error. Members of the

police and fire departments from Lachine, a bordering municipality, and the fire department from the Naval Depot located in LaSalle arrived a few minutes later. Altogether some 200 workers and volunteers were present shortly after 8:30 a.m. Rescue work began immediately. The first of the injured reached the LaSalle General Hospital, about 2.4 miles from the explosion site, at 8:35 a.m. Emergency operations had been initiated there and physicians were awaiting the victims. At 8:50 a.m. the Mayor of Montreal gave his permission for the Montreal Civil Protection to aid Ville LaSalle. He had received an official call for this aid from the Mayor of Ville LaSalle.

Before 9:00 a.m. the Civil Protection Coordinator and the LaSalle Police-Fire Director established a control center in the housing project rental office located in one of the undamaged buildings. Approximately 700 unsolicited workers from nearby communities and volunteers from the immediate area had converged on the site of the explosion. In addition, the Mayor of LaSalle arrived and a representative from the Quebec Provincial Red Cross began appraising the extent of the disaster to determine the number of volunteers required from his organization. Fifteen minutes later, Civil Protection equipment trucks were dispatched from Montreal headquarters together with welfare volunteers alerted by the Welfare Officer. They arrived about 9:45 a.m. The welfare workers set up their operations in the disaster control center, in which the telephone company had installed four emergency lines.

A temporary morgue was established by the coroner at the indoor hockey rink of the LaSalle Recreational Center. The LaSalle General Hospital received 45 casualties and requested blood from the Red Cross. As a result of this request the Red Cross Blood Center in Montreal, usually opened at noon, was prepared at 10:30 a. m. to accept donors. An appeal for blood donors was broadcast over radio and television stations in Montreal. By 3:00 p. m. that afternoon donors were responding in such numbers that these requests had to be rescinded. Blood contributors were asked to wait until the following day.

By 10:00 a. m. the control center at the site of the disaster had become so over-crowded that the Civil Protection Coordinator called the Superintendent of Schools to request additional space. At 11:30 a. m. the welfare center was transferred a half-mile away to St. Clement School. Subsequently, the telephone company installed emergency lines at St. Clement's and the Canadian Army sent and set up four stoves there.

At noon the Deputy Commissioner of the St. John's Ambulance Service arrived at the explosion site. Some 50 volunteer members of that organization were already there, providing, with the police and civilian volunteers, ambulance transportation and first aid for the injured. At about the same time the Commander of the Quebec Division of the Salvation Army called from Ottawa where he had gone on business--he had only just heard of the explosion--to determine the extent of his organization's involvement in welfare operations. Satisfied that "they had the situation in hand," he

remained in Ottawa. At 5:00 p.m., convinced by subsequent reports that the disaster had been of greater scope than he had realized, the Commander left Ottawa and arrived in Montreal three and a half hours later, about 8:30 p.m. He remained at the scene of the explosion until 5:30 Tuesday morning.

At 12:30 p.m. the Civil Protection Welfare Officer called a conference of the heads of all the organizations participating in the welfare operations at St. Clement's -- the Red Cross, the Salvation Army, St. John's Service, a number of Boy Scouts and Girl Guides, and the Vincent dePaul Society-- to set up a division of labor and to detail specific jobs.

By 1:00 p.m. the Coordinator of Civil Protection reported that rescue actions "for all intents and purposes were terminated." All of the injured had been removed; although all fatalities had not been recovered, the emergency characteristic of the first hours of operations had passed. Rescue operations were, accordingly, turned over to the LaSalle municipal authorities. By 2:00 p.m. the contingent of Red Cross volunteers, food and clothing had arrived at the St. Clement's Welfare Center. By 3:00 p.m. the kitchens were in operation prepared, with additional hot meals sent from the Queen Elizabeth Hotel in Montreal, to feed both evacuees and emergency workers.

When it became apparent that the residents of the other buildings in the housing project were not to be allowed to return to their homes Monday night, a second welfare center was set up at the Henri Forest School. By

8:00 p.m. housing arrangements for evacuees were being made from this center. Emergency workers remained at the site of the explosion all Monday night, but there was little to do at that location. LaSalle General Hospital returned to its normal schedule at 7:30 Tuesday morning.

General Comparisons: Montreal and Indianapolis

Before considering in more detail the responses of the several Montreal organizations and their counterparts in Indianapolis, a very brief comparison of the two disasters themselves may be useful in providing a context for these organizational activities. A note on the French-English setting of the Montreal disaster may also be helpful. Problems of co-ordination and organizational boundaries, communication, convergence and disaster plans will be discussed as they are relevant to specific organizations.

Barton has suggested a three dimensional typology of "collective stress situations" in which both the Montreal and Indianapolis explosions can be located.² Reference to his typology allows comparison of the two explosions in terms of (a) the scope of the disaster, (b) the time prior to the impact during which the danger is known, and (c) the degree of institutional preparedness. Seen in these dimensions the Montreal and the Indianapolis explosions fall in the same category. In each the affected area was a segment of a city -- involving neither an entire community as is frequently typical of floods and hurricanes nor a larger regional or societal system often characteristic of earthquakes and major economic

disasters. In each the disaster was sudden, allowing little or no time for specific preparations; in each, as a result, the degree of organizational preparedness was limited.³

Interestingly, both explosions took place in locations politically separate from the major metropolitan areas. On the one hand, the explosion occurred in LaSalle, a municipality some seven miles from Montreal, and, on the other, in the state-owned fairgrounds four miles north of downtown Indianapolis. The Toronto Globe and Mail reported that this political distinction "kept the City of Montreal police and fire departments, the island's largest, out of the disaster area until early afternoon."⁴ A respondent from the Montreal Civil Protection believed that this resulted less from what The Globe and Mail had called an "inter-municipality squabble" than from the simple fact "that the LaSalle authorities didn't realize they had all this help waiting for them." Permission to cross municipal lines is easily obtained under disaster conditions, this respondent argued. In the Indianapolis explosion, only after the emergency had passed did the State Police, who had official jurisdiction over such state-owned property, exercise more than nominal charge of the situation. While Barton suggests that disasters of limited scope -- such as these -- allow those affected to draw aid from sources outside their area, it is clear that a number of other variables are involved, not the least of which is politics.⁵ Other problems of jurisdiction which resulted from the scope and locations of the explosions will be discussed later.

Of interest from a cross-cultural perspective is the bilingual setting of the Montreal explosion. Given that many residents speak both French and English in Montreal, and that the relationships between the two ethnic groups are alleged to be somewhat strained at present, it might be suspected that language differences would affect in some way the disaster responses of the various organizations. However, no untoward effects were reported. St. John's Ambulance Service, for example, has both French and English speaking divisions. Although both were involved in rescue, first aid, and transportation activities, no problems or difficulties were reported. Indeed, the superintendent of the most active division was English speaking, but French speaking volunteers who reported for assignments were "well received . . . and they appreciated the way it was organized by (the superintendent)."

Fritz emphasizes the unifying and therapeutic functions of disasters: cultural discriminations and social differences, he argues, are largely forgotten under disaster conditions because the entire population is affected. There is as a result "a general democratization of the social structure."⁶ Clifford, on the other hand, in his comparative study of Mexican and Texan response to the Rio Grande flood of 1954, stresses the "persistence of social patterns." He takes the view that despite the disruptions associated with community disasters, values and relationships defined as important under "normal" conditions will persist -- even if they are dysfunctional -- under "abnormal" disaster conditions.⁷ That these two

post-disaster reactions are not necessarily exclusive is suggested by the publication, after the Montreal explosion, of three Montreal Gazette editorials: one praising the cooperation of rescue workers and volunteers, "Acting Like Neighbors"; Another discussing Premier Lesage's speech to the Montreal Reform Club on the move to outlaw English in Quebec; the third concerning the problem of bilingualism in the civil service.⁸ The extent to which traditional social patterns persist or are laid aside in disasters involves a number of dimensions -- the extent of the disaster, the influence and importance of the patterns, etc. -- which have yet to be specified. Data from the Montreal explosion suggest that the response may not be either - or, but rather that various parts of the social structure may be differentially affected.

Specific Organizational Comparisons: Montreal and Indianapolis

Of the organizations directly involved in rescue and welfare operations following the Montreal explosion probably the LaSalle Police-Fire Department and the Montreal Civil Protection were among the more important. The official structure of the LaSalle Police-Fire Department, in which both the police and fire personnel are organized under a single director, is peculiar to Quebec Province and particularly to its smaller municipalities. There are, according to the LaSalle Director, only some fifteen municipalities in the Province with separate police and fire departments. The LaSalle Director suggested that at least part of the rationale for this arrangement is that it provides a contingent of professionally trained

firemen in place of the volunteer departments often typical of smaller communities. Although all 75 members of the department are sworn in as police, paid on that basis and wear the police uniforms, they are trained in both police and fire work and permanently assigned to either police or fire duties. Thus there are on duty, during each of the three daily shifts, 16 men -- 9 for police and 7 for fire duties. Only in emergencies do firemen double as police or vice versa.

The LaSalle Police-Fire Department has an emergency plan arrangement with the LaSalle General Hospital. In disasters such as the apartment house explosion the hospital is immediately notified and all its personnel are called on duty to receive the injured. The department also has a mutual aid agreement with Lachine, a neighboring municipality, and a "gentlemen's agreement" with the naval depot located in LaSalle. In the rescue operations at the explosion these additional workers were augmented by unsolicited police, fire and civil defense aid from other communities, primarily from Westmount, Pointe Claire, St. Laurent, Valleyfield, Longueuil, St. Lambert, Verdun, Roxboro and Ste. Genevieve de Pierrefonds, and by cadets from the naval cadet ship HMCS Hochelaga. Elements of some of the Montreal organizations, notably the Civil Protection and St. John's Ambulance Service, were also involved in the rescue operations.

The LaSalle Police - Fire Department received its most important assistance in welfare and rescue operations control and coordination from

the Montreal Civil Protection. Members of the Civil Protection were in charge of the welfare operations following the explosion and were associated (at least) with the coordination of the immediate rescue operations. Under the Montreal Disaster Plan, which had been drawn up by a committee of representatives of the city's emergency organizations, Civil Protection officers were to assume control of all welfare operations. This portion of the plan was apparently carried out in LaSalle despite its political autonomy but with the approval of the Mayor of LaSalle. The other major welfare organizations involved -- the Red Cross and the Salvation Army -- were in any case Montreal-based and familiar with the disaster plans.

There was, however, some inconsistency in the reports -- if not in the actual rescue operations leadership. The Director of the LaSalle Police-Fire Department, while admitting the close cooperation of the Montreal Civil Protection, stated that the official command of these operations remained his: of the Civil Protection workers, he said:

They look after their own staff, you know, but I was ... responsible for the operations. But there was no problem that way. We ... got them together and said, 'Well you do this and we'll do that' and that's it.

The Coordinator of the Civil Protection, while acknowledging that legal boundaries may have been breached, suggested that he had assumed the leadership of operations:

At any disaster, no matter which one you come in contact with, this has been my experience throughout the years: a state of confusion exists, and they are all looking for a leader, no matter who he is, no matter who he belongs to. And when I

say 'leader', I mean an official leader -- not an emergent leader from the crowd ... (but) somebody who represents an official body. If he talks a little louder than everybody else or ... makes decisions on the spot ... people will naturally start going to him with questions. And he'll find himself gradually taking control, even though he doesn't want to. And this happens to me nearly every damn time. I think because I talk a little loud, maybe that's why.

So this is what I found anywhere I (have) ever been on a disaster, where I have been involved in it. As I say, I don't know if it's because I speak a little loud or something like that, but ... I start getting things thrown at me all the time. And I have no objections to it, but sometimes you have to be careful ... like in Ville LaSalle, for instance, yesterday. I mean I'm not in my bailiwick, I'm there helping. My services are there to help those people that's all, so if we can do it any time at all, we relinquish the authority as soon as somebody in authority wants us (to).

There is then, some difficulty in establishing exactly who was in charge of rescue operations. Some reports suggest that, at least officially, the Mayor of LaSalle and, under him, the LaSalle Police-Fire Department directed the rescue operations and that the Montreal Civil Protection directed the welfare operations. There are other indications, however, from members of the Civil Protection and the Red Cross which suggest that Civil Protection coordinated both the rescue and the welfare operations. Probably the most appropriate conclusion on coordination would be that it was fluid; its location was dependent on at least two variables, the official structure of the situation and the available resources of a given organization. In LaSalle the first of these variables placed control in the municipal organizations, the Mayor and the Police-Fire Department. Given

the relatively limited resources of these local organizations, coordination was also a function of the Montreal Civil Protection -- an organization with a much greater range of resources. In any case, there was no evidence of major problems deriving from this variability. Indeed there appeared to be considerably more coordination and less duplication of rescue efforts than was the case in Indianapolis where police, fire and civil defense were for at least an hour after the explosion operating independently of each other.

In disaster after disaster, it has been observed that the establishment of a control center is the crucial element in coordination for it provides the facilities for communications, both inter- and intra-organizational. At the Montreal disaster Civil Protection appeared to be most adequately prepared to set up this kind of communications center. Its members were equipped on their arrival at the scene with walkie-talkies providing the necessary link among themselves and had radio communication with their headquarters in Montreal. Once emergency lines had been installed in the rental office, communications coordination both at the scene and with organizational elements not present was improved.

Civil Defense in Indianapolis, like Civil Protection in Montreal, appeared to possess a greater capacity to call on available resources like heavy equipment necessary in rescue work than any of the other organizations. That Civil Protection was immediately involved in rescue co-ordination in the Canadian operation and that Civil Defense remained on the periphery of these operations in Indianapolis perhaps helps to explain the seeming greater efficiency of Montreal operations, although clearly there were other factors involved also.

Both Civil Protection in Montreal and Civil Defense in Indianapolis are largely volunteer organizations. The Montreal organization is directed at the municipal level by the Montreal Security Commission and at the provincial level by the Minister of Municipal Affairs and his representative in the city. The group in the city involves some 15 full-time professional workers and 40 part-time workers. The rest of the membership of the organization is made up of trained volunteers. Civil Protection had approximately 550 volunteers working in shifts at the LaSalle explosion.

Available information indicates that the Montreal Civil Protection, like its Indianapolis counterpart, had the most wide-ranging and fully operative disaster plan of any of the organizations involved. In addition to the locations of emergency equipment -- air masks and tanks, oxygen masks, acetylene torches, jack hammers, and the like -- the disaster plan indicated the channels of communications within the organization and

with liaison officers in other organizations, particularly the police and fire departments in Montreal. An elaborate "fan-out" system of alerting the membership was also operative in meeting the apartment house emergency. Like the Indianapolis Civil Defense, the Montreal organization responds to both natural and man-made emergencies. (The major reason for changing the name of the Montreal organization from "Civil Defense" to "Civil Protection" was to escape the public assumption that the organization was to operate only after nuclear disasters.) Probably because the Montreal Police and Fire Departments were not immediately available-- and because Civil Protection was -- the latter organization was actively involved in the LaSalle explosion. In Indianapolis, among other reasons, the Civil Defense organization was not so directly involved because the police and fire departments were immediately called.

With the exception of one important difference in function, the Red Cross in Montreal is very similar to its counterpart in Indianapolis. Like the American Red Cross, the Canadian organization is largely volunteer. Some 90 percent of the Quebec Division is made up of non-professionals. In addition to the veteran's services, the women's work committee, the blood donor committee, the water safety service, nursing and Junior Red Cross, the Quebec organization includes a disaster relief section. In Montreal this element of the organization also includes what are called the "flying squad" and the "disaster squad." The former is made up of women volunteers who are trained in disaster services such as registration

and canteen operations; the latter is composed of four groups of three men. Each group is on 24-hour alert for a week at a time and is prepared to proceed directly to the scene of an emergency and provide the relief services of the Red Cross. Unlike the Indianapolis Red Cross which provides for the long-range rehabilitation of victims of a disaster, the Montreal Red Cross is engaged principally in short-run aid to those affected by a disaster. It provides food and clothing and shelter for only the period immediately following the impact. Statements in the field interviews and in the Canadian newspapers suggest that the bulk of the long-range measures would be taken by the individuals themselves insofar as they were capable or, if they were not, by the welfare agencies of the provincial and municipal governments.

A unique relationship exists between the Indianapolis Red Cross and the county Civil Defense organization. By law the Civil Defense Director has the responsibility of coordinating operations at all disasters; this obligation includes both inter-organizational and intra-organizational coordination. As a result the same man holds the positions of Chairman of the Red Cross Disaster Committee and Director of the Civil Defense Emergency Welfare Services. A similar but less official arrangement exists between the Montreal Red Cross and Civil Protection. Under the Montreal Disaster Plan, the Welfare Officer of Civil Protection has charge of all welfare operations and is to coordinate the activities of other organizations such as the Red Cross and the St. John's Ambulance Service.

However, some evidence exists of inter-organizational duplication at LaSalle, especially among the Red Cross and other organizations. According to members of the Montreal Red Cross, one of the first duties of that organization in time of disasters is the registration of the victims -- the injured, the fatalities, the missing. There was indication that this compilation was also undertaken by the LaSalle Police-Fire Department, the Coroner, and Civil Protection. This was also true in the Indianapolis explosion, where lists were compiled by the hospitals, the Police force, the Coroner's office as well as the Red Cross. In addition, some conflict-- at least of a verbal nature -- existed between the Red Cross and Civil Protection. One member of the Montreal Civil Protection indicated that the Red Cross appeared to be somewhat reluctant to accept the leadership of Civil Protection and that an informal competition in "public relations" existed between the two organizations, particularly by way of organizational symbols:

Now the decision and the agreement was that Civil Protection would control the operations through the Coordinator of Civil Protection ... So this is fine. Everybody agreed to it. But we get to the scene of the disaster and the Red Cross, the first thing they do is hoist up their great big flag ... and then they start elbowing everybody aside and taking over everything.

According to this member of Civil Protection, his experience suggests that such reluctance to accept Civil Protection leadership may gradually disappear. With each emergency it tends to appear less frequently. Whether conflict and duplication can be avoided by agreements of a more

official nature on inter-organizational leadership or by more detailed schedules of inter-organizational division of labor is a question -- interesting in itself -- but requiring more information than is presently available.

Within the Red Cross organization several problems developed, none of which were of major proportions. Despite an attempt to estimate the number of volunteers required and despite waiting until 2:00 p. m. before sending the greatest number of workers to the scene, there were still too many Red Cross personnel concentrated at the explosion site for the work that needed to be done. Consequently, about half their number were sent to the blood center and to the Montreal headquarters to assist in operations there. The problem, then, lay in determining the most efficient disposition of workers -- a difficulty that also arose in Indianapolis. There it was a similar problem in the dispersal of available goods. Supplies of food, for example, were not released for distribution until some time after they were needed. (It is not clear from the DRC data, however, if the authority to release the food belonged to the Red Cross or to some other organization.) Until the supplies were released the Red Cross did provide food orders which could be exchanged at grocery stores. Again, the problem was providing for the most efficient use of available resources. It should be noted nevertheless, that these problems are not peculiar to the Red Cross, but are typical of the majority of organizations involved in meeting disaster needs. They are, in fact, consequences of the problems of

convergence which are associated with any disaster.⁹

Under the Montreal Disaster Plan the Salvation Army units in Montreal, of which there are ten (the remaining 13 which make up the Quebec and Eastern Ontario Division are located in other municipalities) are responsible for providing clothing for those affected in a disaster and canteen facilities for emergency workers. In addition to these functions, the Salvation Army also provides counseling and ministry, i. e., "personal service" -- to those who are anxious for others or bereaved in the disaster.

In the LaSalle explosion, the Salvation Army sent a contingent of nurses from its Montreal hospital to help in providing first aid for the victims. Interviews with the Divisional Commander of the Salvation Army and with representatives of the other emergency organizations did not provide any evidence to suggest major problems in the operations of the Salvation Army. The same was true in the Coliseum explosion in Indianapolis. The only concerns the Montreal Commander voiced were that the details of the Montreal Disaster Plan perhaps were not as clearly understood as they might have been, and that the very generous response of the public to appeals for clothing had created something of a problem in sorting and storage.

There is no organization in Indianapolis similar to the St. John's Ambulance Service as it operated at the LaSalle explosion. The Canadian organization is national in scope and voluntary in membership. Its primary local functions are to provide first aid, home nursing and ambulance

service in times of emergency and disasters and, in "normal" periods, to provide these services to those who cannot afford them from other agencies. The organization is patterned after the army with brigade headquarters in each of the provinces. Within the provinces the units are divided into areas and divisions. National and provincial officers and their staffs are the only salaried members of the organization. In Montreal there are some 800 trained volunteers in the St. John's Service divided into nursing divisions for women, ambulance divisions for men, and cadet divisions -- both nursing and first aid ambulance work -- for boys and girls. Each division is composed of 30 to 40 members.

At the LaSalle explosion members of the organization were engaged primarily in ambulance and first aid operations. They were also available for assistance in sorting and distributing clothing and for help in providing canteen and food services. Although St. John's Service is normally less involved in actual rescue than in first aid, some members did assist the police and Civil Protection in searching for victims of the explosion. In addition, members of the nursing divisions were available to help at the LaSalle General Hospital as nurses' aides. Communications within the organization were provided by members of the radio division. The official disaster policy of the organization is to work under the supervision of some larger organization -- normally the Civil Protection -- and, perhaps because of this policy, there was no indication of any inter-organizational difficulties.

There were some difficulties in connection with the handling of casualties by the hospitals. In the first place, as at Indianapolis, there was no controlled distribution of victims to the available medical institutions. In Montreal, the LaSalle General Hospital received by far the bulk of the medical workload while other hospitals in the metropolitan area were not extensively utilized. Only 18 casualties were sent to two other local hospitals. Also, as at Indianapolis, there was no initial centralized source of information of the whereabouts of patients. It was likewise reported that there had been no identification or tagging of victims upon their arrival at LaSalle General. This too had happened with the handling of casualties at some of the Indianapolis hospitals. Overall, however, while there were these difficulties in the Montreal situation, there is no indication that they were major problems or that they seriously affected in any way medical treatment or care.

Some Concluding Observations

The conclusion of this report contains some extensions on points already made as well as summary statements of the implications of certain of these previous remarks. Matters that seem particularly worth noting again are: organizational coordination, disaster plans, convergence and communication, and inter-organizational conflict.

1. When major disasters occur in metropolitan areas but in locations which are politically separate from the city, inter-organizational coordination is likely to be difficult to establish. In both Indianapolis and Montreal

the specific locales of the explosions and the inability of state organizations on the one hand or municipal organizations on the other to handle the situations necessarily involved organizations from the larger cities. Because the disaster plans of both Indianapolis and Montreal applied only within the political boundaries of their own areas, attempts to implement existing schemes of inter-organizational coordination outside these limits were in a strict technical sense illegal. Unless agreements are made before the occurrence of emergencies, coordination and control arrangements have to be ad-libbed with a consequent increased probability of difficulties. When agreements across political lines already exist, one might expect a greater degree of efficiency and a somewhat lesser degree of duplication and inter-organizational conflict.

2. Disaster plans greatly increase the capacity of organizations to respond to emergency situations. This observation in itself is hardly startling. Similarly, unless these plans involve more than statements on paper they are unlikely to be of any major use. But, in addition, the organizations participating in such plans must be informed not only of their own responsibilities but also of those of other organizations. In Indianapolis particularly, the potential usefulness of the Civil Defense was apparently unknown to the Police and Fire Departments. In Montreal there was some evidence of a kind of duplication which might have been avoided were the organizations involved fully aware of their own responsibilities and those of the others. While the Civil Protection-Red Cross difficulties apparently involved other variables as well, at least a portion of them

might have been eliminated by means of more explicit pre-planning.

3. The convergence response to disasters -- particularly that of information -- tends to increase communications difficulties within and among emergency organizations. In Indianapolis these difficulties were compounded by the absence of a disaster communications center: the result was the diffusion of the communications network among the several participating organizations -- the Indianapolis Police and Fire Departments, the Civil Defense, Red Cross, and Salvation Army. Consequently, much duplication and delay accompanied the rescue and welfare efforts of these organizations. The situation was less difficult in Montreal where a disaster control center was established shortly after the impact. Nonetheless, the convergence of outside telephone calls on both the LaSalle General Hospital and the Red Cross, and the lack of an adequate means of inter-organizational communication complicated the emergency operations of these organizations. The LaSalle General Hospital, for example, found it virtually impossible to communicate with any organizations at the scene of the explosion because their available telephone lines were tied up with incoming calls. Indeed, one of the suggestions which came out of their experience with the LaSalle explosion pointed up the necessity for a supplementary communications network linking the hospital with the Police-Fire Department. The Montreal Red Cross, however, had the resources for setting up an additional communications center in one of their mobile units. Despite this emergency measure, a large proportion of their personnel

were still employed in answering incoming messages. Of the organizations involved in the Montreal disaster, Civil Protection appeared to be most adequately prepared to meet the convergence problem: their communications system was mobile and adaptable, and was operative almost immediately after the impact. In addition to the convergence of information, organizations at both the Montreal and the Indianapolis explosions experienced the personnel and material convergence typical of disaster response. The nature of these convergences has been suggested rather more implicitly than explicitly in this report.

4. Problems of overlapping or ambiguous spheres of authority among organizations appear to be aggravated by attempts to preserve organizational integrity -- or by perceptions of such intents. Organizational symbols such as flags, armbands, and uniforms may be defined as attempts on the part of the organization to capture public recognition for itself. There was some evidence in Montreal of this inter-organizational competition, especially among predominantly volunteer organizations such as Civil Protection and the Red Cross. It would be interesting to determine the functions of these symbols and compare them with the consequences of organizational symbols among professionals such as police and fire departments. One suspects that uniforms and other symbols among professional organizations -- being part of the general expectations attached to these organizations -- would play a less important part in producing or maintaining inter-organizational conflict. Insofar as these symbols are associated with the larger area of authority and control, they would appear to merit the attention of researchers.

FOOTNOTES

1. For a complete description and analysis of the Indianapolis Coliseum explosion see Thomas E. Drabek, Disaster in Aisle 13: A Case Study of the Coliseum Explosion at the Indiana State Fairgrounds, October 31, 1963 (Columbus, Ohio: Disaster Research Center, 1967). See also Thomas E. Drabek and E. L. Quarantelli, "Scapegoats, Villians and Disasters," Trans-Actions V-4 (March, 1967), pp. 12-17.
2. Allen H. Barton, Social Organization Under Stress: A Sociological Review of Disaster Studies, (Washington, D.C.: National Academy of Sciences - National Research Council, Publication 1032, 1963), pp. 3-8.
3. Together with studies of the effects of World War II bombing raids, disaster studies of this type -- those involving segments of cities or small communities without an adequate period for preparation or evacuation -- are most typical of disaster research in the past twenty years. Ibid. , p. 5.
4. The Globe and Mail, Toronto, March 2, 1965.
5. Barton, loc. cit.
6. Charles E. Fritz, "Disaster," in Robert K. Merton and Robert A. Nisbet (eds.), Contemporary Social Problems (New York: Harcourt, Brace and World, Inc., 1961), p. 685.
7. Roy A. Clifford, The Rio Grande Flood: A Comparative Study of Border Communities in Disaster (Washington, D.C.: National Academy of Sciences - National Research Council, Publication 458, 1956), pp. 127-131.
8. The Gazette, Montreal, March 4, 1965.
9. See Charles E. Fritz and J. H. Mathewson, Convergence Behavior in Disasters: A Problem in Social Control (Washington, D.C.: National Academy of Sciences - National Research Council, Publication 476, 1957).

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SUMMARY

On March 1, 1965, an explosion occurred in an apartment house complex in Ville LaSalle, a suburban municipality of 41,000 people seven miles southwest of Montreal, Canada. In addition to extensive property damage, 27 persons were killed and 29 out of 48 injured were hospitalized. The disaster activated not only LaSalle but also Montreal emergency organizations.

A Disaster Research Center field team studied the similarities and differences between the organizational responses in this incident and those that occurred in the 1963 Coliseum explosion in Indianapolis, Indiana.

In general, the same kinds of problems developed in both situations. There were some difficulties in inter-organizational coordination. Not all groups, despite the existence of disaster plans, were aware of the responsibility of others. There was informational convergence which complicated emergency responses. Overlapping and ambiguous spheres of authority appeared as a result of the fact that emergency operations took place across usual jurisdictional boundaries.

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| 13 ABSTRACT A team from the Disaster Research Center at Ohio State University studied the organizational response to an explosion in an apartment house complex in Montreal, Canada on March 1, 1965. A major purpose of the study was to examine how the emergency responses in this disaster were similar and/or different from those observed in the 1963 Coliseum explosion in Indianapolis, Indiana. In general, organizations in both disasters had somewhat the same kinds of difficulties in coordinating with other organizations and had similar convergence and communication problems. | | |

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